
Office of Legislative Auditor

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Department of Transportation and and Development

Bridge Trust Program

December 2001

This report gives the results of our examination of the performance data reported for the Bridge Trust Program within the Department of Transportation and Development for fiscal years 2000 and 2001. We conducted the examination at the request of the Performance Review Subcommittee of the Joint Legislative Committee on the Budget.

Sincerely,

Daniel G. Kyle, Ph.D, CPA, CFE
Legislative Auditor

Background

The Crescent City Connection Division (CCCD) and the Sunshine Bridge comprise the Bridge Trust Program within the Department of Transportation and Development (DOTD). The CCCD is comprised of two bridges (known as the Crescent City Connection) and six ferry boats that cross the Mississippi River in the New Orleans area.

For fiscal years 2000 and 2001, the CCCD had 13 different performance indicators and the Sunshine Bridge had three performance indicators. The Performance Review Subcommittee requested that the Office of the Legislative Auditor (OLA) determine if the data reported for these performance indicators for fiscal years 2000 and 2001 are accurate, and if not, what are accurate values. In this report, we also addressed other issues raised by the Performance Review Subcommittee.

Crescent City Connection Bridge

Do the performance indicators for fiscal years 2000 and 2001 accurately reflect what the stated performance standards call for?

Accident Rate per Million Vehicle Miles. The method by which the CCCD calculated the accident rate per million vehicle miles in fiscal years 2000 and 2001 did not provide an accurate measurement. The section of highway used for counting the number of accidents did not coincide with the section of highway used for calculating the number of vehicle miles. Exhibit 1 contains the formula used by the CCCD to calculate the accident rate per million vehicle miles.

Exhibit 1

Formula Used for Accident Rate Calculation

Accidents per Million Vehicle Miles	=	$\frac{\text{Total Number of Accidents}}{2 \times \text{Number of Vehicles} \times \text{Distance}}$	X	1,000,000
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Source: Prepared by legislative auditor staff using information provided by CCCD officials.

The CCCD police have jurisdiction over more than 10 miles of expressway. According to Louisiana Revised Statute (R.S.) 48:1101.1(B)(2), their jurisdiction extends from the convergence of US Highway 90 and the Westbank Expressway (US 90B) on the west bank of the Mississippi River to the intersection of the Broad Street Overpass with Interstate 10 on the east bank of the Mississippi River. According to CCCD officials, the section of roadway used to report the performance indicator value for the number of accidents begins one-tenth a mile before the CCCD toll plaza and ends at the intersection of the Broad Street Overpass with Interstate 10, which is a distance of 3.4 miles. Exhibit 2 on page 4 portrays some of the roadways contained in CCCD's jurisdiction.

CCCD obtains the number of vehicles for this formula from the automatic treadle counts at the bridge's tollbooths. Since the treadle system counts vehicles going only one way (from the west bank to the east bank of the Mississippi River), the vehicle count is multiplied by 2 to obtain the number of vehicles crossing the bridge in both directions. The distance factor used in fiscal year 2000 to compute the number of vehicle miles was the full 10-mile section of roadway in the CCCD jurisdiction. The distance factor used in fiscal year 2001 to compute the number of vehicle miles was 4.3 miles, which is the distance from Terry Parkway to the intersection of the Broad Street Overpass with Interstate 10.

Therefore, to compute the accident rate per million vehicle miles for fiscal year 2001, 3.4 miles of road were used for counting accidents (numerator), but 4.3 miles of road were used for the computation of vehicle mileage (denominator). These distances are portrayed in Exhibit 2 on the following page.

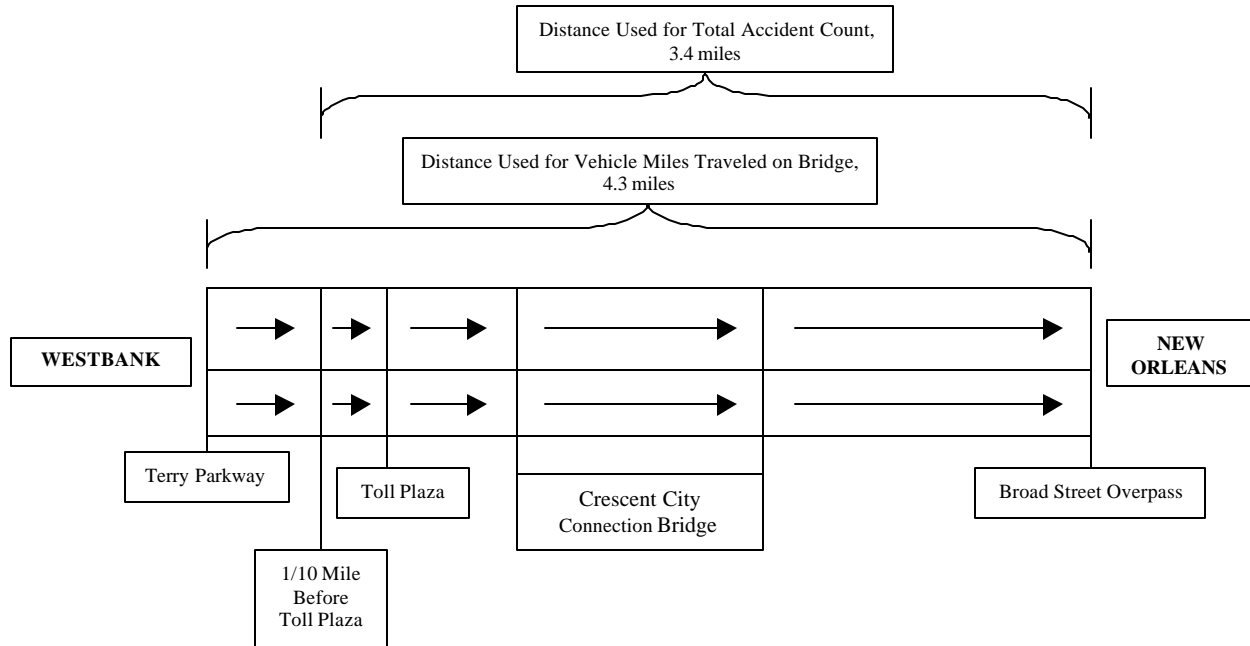
The CCCD police provided to us the count of accidents occurring between one-tenth of a mile before the toll plaza and the intersection of the Broad Street Overpass with Interstate 10 (3.4 miles) for fiscal years 2000 and 2001. These figures exceed the numbers of accidents reported in the Louisiana Performance Accountability System (LaPAS) for both of these fiscal years (see Exhibit 4 on page 5). We then calculated the vehicle mileage using CCCD's procedure shown in Exhibit 1 substituting a distance of 3.4 miles (instead of 4.3 miles), so that accidents and vehicle mileage would be computed using the same distance and section of roadway.

If there are errors in the reported data, what are the correct values for the performance indicators?

There are eight performance indicators for the bridge operation of the CCCD. Five of these indicators were reported for both fiscal years, and three indicators were reported for only one fiscal year. For fiscal years 2000 and 2001 combined, we determined that the values reported for eight of 13 performance indicators were not correct. Exhibit 4 on page 5 compares the values that CCCD reported for Bridge Operations to values that we calculated. This exhibit also gives the difference between the two values for each performance indicator.

Exhibit 2

Crescent City Connection Diagram of Roadway Lengths



Source: Prepared by legislative auditor staff using information obtained from the CCCD.

Exhibit 3

Computation of Accident Rate per Million Vehicle Miles on Crescent City Connection Bridge

Performance Indicator	Fiscal Year 2000	Fiscal Year 2001
Total Number of Accidents ¹	1,035	1,013
Number of Vehicle Miles Traveled on Bridge ¹	186,049,374	195,593,758
Accident Rate per Million Vehicle Miles	5.563	5.179

¹From 1/10 a mile before the toll plaza to the intersection of the Broad Street Overpass and Interstate 10 (.3.4 miles)

Source: Prepared by legislative auditor staff using data obtained from the CCCD.

Exhibit 4

Crescent City Connection Division - Bridge Operations Comparison of Calculation of Performance Indicator Values Fiscal Years 2000 and 2001

Name of Indicator	Fiscal Year 2000			Fiscal Year 2001		
	Reported by CCCD	Calculated by OLA	Difference	Reported by CCCD	Calculated by OLA	Difference
Accident Rate per Million Vehicle Miles	4.13	5.563	1.433	4	5.179	1.179
Total Number of Accidents	610	1,035	425	715	1,013	298
Number of Police Vehicle Miles	371,410	471,893	100,483	Not an Indicator	N/A	N/A
Number of Vehicle Miles Traveled on Bridge (millions)	299.3	186	(113.3)	186.77	195.6	8.83
Number of Projects Completed	1	1	0	Not an Indicator	N/A	N/A
Dollars Generated That Are Dedicated to Improvement Projects	Not an Indicator	N/A	N/A	\$3 million	\$3.26 million	\$260,000
Square Feet Painted	0	0	0	0	0	0
Cost of Painting per Square Foot	\$0	\$0	\$0	\$0	\$0	\$0

Source: Prepared by legislative auditor staff using internal documents from CCCD and LaPAS information from the Office of Planning and Budget.

Were there adequate management policies/mechanisms in place to ensure correct reporting of the required performance information?

Accident Rate per Million Vehicle Miles. The treadle system appears to be an adequate mechanism to count vehicle traffic on the bridge, and the CCCD police appear to have adequate mechanisms to count the number of accidents. Management needs to determine which section of the CCCD roadway will be used to measure the accident rate per million vehicle miles and use this same section of road in calculations of both the number of vehicle miles and number of accidents.

Dollars Generated That Are Dedicated to Improvement Projects. According to a CCCD official, calculation of this indicator is based on R.S. 47:820.5(B). This law provides that after bridge toll revenues are used for operation and maintenance of the CCCD bridges and ferries, the remaining toll revenue is dedicated to bridge improvement projects. DOTD has an adequate accounting system to compute the quarterly amount of remaining bridge toll revenue.

Square Feet Painted and Cost of Painting. According to a CCCD official, painting of the bridge did not commence until July 2001, which is in fiscal year 2002. This same official stated that CCCD's engineering consultants will track the performance indicator value for square footage painted. During our examination, we did observe that the bridge is being painted.

Did the factors provided by DOTD officials at the October 26, 2001, meeting of the Performance Review Subcommittee of the Joint Legislative Committee on the Budget affect the performance information reported in fiscal years 2000 and 2001?

Inconsistent Measures of Road Lengths Used to Determine Vehicle Miles. In their October 26, 2001, testimony to the Performance Review Subcommittee, DOTD officials explained how an incorrect mileage factor (10 miles) was used in fiscal year 2000 for calculation of vehicle mileage for the Crescent City Connection bridge. As explained above, we found that a measure of road length mileage not consistent with the road length used to count accidents was also used for fiscal year 2001. These inconsistent measures of road length definitely affected two performance indicator values for both fiscal years: the number of vehicle miles traveled and the accident rate per million vehicle miles on the Crescent City Connection bridge.

Poor Vehicle Counts Due to Problems With the Computerized Toll Accounting Mechanism. According to CCCD officials, the treadle system that counts axles crossing through the toll plaza has provided accurate counts of vehicles for both fiscal years. The main problem was that this system could not produce a report to reconcile toll revenue with treadle counts for each toll collector for each shift. However, since May 2001, the system has been

upgraded to produce these reports and the CCCD management can now reconcile the amount of tolls collected with the number of vehicles for each collector on each shift.

Possible Misunderstandings by Person(s) Completing Year-end Performance Reports as to How to Compute Various Measures. According to the CCCD Executive Director, there has been confusion concerning whether the performance indicator value for each quarter should represent just that quarter's performance or the cumulative year-to-date value. We noted that the value for the "number of ferryboat passengers" in the second quarter of fiscal year 2000 was the number for just that quarter. Other values were cumulative for the year (i.e., total for the first and second quarters).

Do the corrections of these problems identified in DOTD testimony appear adequate to correct these problems?

The corrections to the problems identified in DOTD testimony do appear adequate to correct two indicators: accident rate per million vehicle miles and number of vehicle miles traveled on bridge. However, a third indicator, total number of accidents, was also reported incorrectly in fiscal year 2000 and 2001, but was not addressed in the DOTD testimony. The data to accumulate number of accidents were readily available. We cannot explain why the data entered into LaPas were incorrect, except for possible addition or data entry errors.

Ferryboat Operations

Do the performance indicators for fiscal years 2000 and 2001 accurately reflect what the stated performance standards call for?

The methods by which the ferryboat performance indicators are calculated reflect what the performance standards call for. It should be noted that calculation of the number of ferry boat passengers crossing one way on the Mississippi River is to some extent an estimated count. CCCD counts the number of pedestrians riding on the boats and also counts the number of vehicles. A count of the number of passengers inside vehicles is not taken. Rather, the Federal Transit Administration standard or average of 1.4 passengers per vehicle is used to estimate how many passengers are in the vehicles that cross the Mississippi River by ferry.

Were missing data not available in time to meet the reporting deadline?

CCCCD did not report values for two ferryboat performance indicators in fiscal year 2001. CCCC counts the number of pedestrians and vehicles using the ferries at each crossing daily and accumulates this information in monthly reports. Therefore, the information to compute a value for the number of passenger crossings (one-way) was available to meet the reporting deadline.

Operating costs of the boats could be easily obtained from DOTD's accounting system, and CCCC's accounting department prepares a monthly report of the ferries' revenue. These data are used to calculate the value of the performance indicator "tolls as a percentage of operating cost." Therefore, the information should have been available in time to meet the reporting deadline.

If there are errors in the reported data, what are the correct values for the performance indicators?

There are five performance indicators for the ferryboat operations. Four of these indicators were reported for both fiscal years, and one indicator (percentage of time ferries are in service during scheduled time) was reported only for fiscal year 2001.

For fiscal years 2000 and 2001 combined, we determined that the values reported for four of the seven performance indicators were not correct. In addition, the CCCC did not report values for two of the indicators in fiscal year 2001. Exhibit 5 on page 11 compares the values reported by CCCC to values that we calculated. This exhibit also shows the difference between the two values for each performance indicator.

Are there adequate management policies and mechanisms in place to ensure correct reporting of performance information?

There are adequate mechanisms in place to ensure correct reporting of performance indicators for the ferryboats.

Sunshine Bridge

Do the performance indicators for fiscal years 2000 and 2001 accurately reflect what the stated performance standards call for?

We were unable to determine if the performance values reported in fiscal years 2000 and 2001 accurately reflect the stated performance standards because we could not obtain the complete source documentation used to calculate these values. In fiscal year 2001, DOTD was only required to report data for the second quarter because most indicators for the Sunshine Bridge were supporting indicators. Because toll collections ceased in the third quarter (when no reporting was necessary for the supporting indicators), no data were reported. However, toll revenue as a percentage of operating costs (a key performance indicator) could have been reported. The department reported 0% even though toll collections continued until March 2001.

Were missing data not available in time to meet the reporting deadline?

According to a DOTD official, the fourth quarter performance indicator values for the Sunshine Bridge in fiscal year 2001 were not reported because the data were not gathered as a result of the discontinuation of tolls on the bridge as of March 2001.

If there are errors in the reported data, what are the correct values for the performance indicators?

For fiscal year 2000, DOTD reported values for all three of the Sunshine Bridge's performance indicators. However, we could not re-calculate these values because DOTD could not furnish us with sufficient source documentation in a timely manner. For fiscal year 2001, the CCCD did not report any year-end values for the Sunshine Bridge performance indicators. According to a CCCD official, no values were reported because, as of April 1, 2001, DOTD was no longer collecting tolls or counting vehicles on the bridge. We were able to determine values for two of the three performance indicators in fiscal year 2001. Exhibit 5 on page 11 provides the values reported for the Sunshine Bridge and values that we calculated.

Are there adequate management policies and mechanisms in place to ensure correct reporting of the performance information?

There were adequate mechanisms in place to ensure the correct reporting of two of the fiscal year 2000 values: toll revenue as a percentage of operating cost and tolls collected. However, we cannot be sure of the management policies and mechanisms that were in place at the time of calculation of the fiscal year 2000 indicator “total vehicle trips.” Because the department is no longer collecting tolls, Sunshine Bridge indicators have been discontinued.

Other Matters

While conducting our review of the Bridge Trust Program’s performance indicators reported in fiscal year 2000 and 2001, we noticed that some of the indicators may not be useful for measuring the actual performance of the Bridge Trust Program. Instead, these indicators measure events and occurrences that may be outside of the Bridge Trust Program’s control. Specifically, the following indicators may not be true measures of the program’s performance:

Crescent City Connection Bridge:

- Accident Rate per Million Vehicle Miles
- Total Number of Accidents
- Number of Vehicle Miles Traveled on Bridge
- Dollars Generated That Are Dedicated to Improvement Projects

In order for its performance reporting to be more meaningful, management of the Bridge Trust Program should be held accountable for performance that it can control. Indicators that would reflect the Bridge Trust’s performance include the following:

Crescent City Connection Bridge:

- Accuracy Rate of Toll Collectors
- Operational Cost per Vehicle Crossing
- Toll Tag Usage Rate
- Percentage of Toll Violation Revenue Collected

Ferries:

- Percentage of Time Ferries Are Not Running Because of Inadequate Crew Staffing
- Operational Cost Per Passenger

The legislative staff and the Office of Planning and Budget may be able to work with the Bridge Trust Program and DOTD to develop objectives and performance indicators that will better measure this program’s performance.

Exhibit 5

Comparison of Performance Indicator Values Ferryboats and Sunshine Bridge Fiscal Years 2000 and 2001

Name of Indicator	Fiscal Year 2000 Values			Fiscal Year 2001 Values		
	Reported by CCCD	Calculated by OLA	Difference	Reported by CCCD	Calculated by OLA	Difference
FERRIES:						
Number of Passenger Crossings (one way)	2,321,327	2,974,253	652,926	Not Reported	3,106,941	N/A
Tolls Collected on Ferries	\$215,200	\$443,034	\$227,834	\$472,582	\$472,582	0
Tolls as Percentage of Operating Cost	14.43%	8.72%	(5.71)%	Not Reported	10.00%	N/A
Number of Ferries Operating	5	5	0	5	5	0
Percent of Time Ferries Are in Service During Scheduled Time	Not an indicator	N/A	N/A	86%	89.89%	3.89%

SUNSHINE BRIDGE:

Toll Revenue as a Percentage of Operating Cost	91.51%	Unavailable ¹	N/A	Reported 2 nd quarter only	176.30% ²	N/A
Tolls Collected	\$652,105	Unavailable ¹	N/A	Reported 2 nd quarter only	\$930,840 ²	N/A
Total Vehicle Trips (one way)	2,198,083	Unavailable ³	N/A	Reported 2 nd quarter only	Unavailable ³	N/A

¹Two months of data were not available.

² These figures represent only nine months of data (July 2000 through March 2001).

³The documents were not made available in time to the legislative auditor to be included in the report.

Source: Prepared by legislative auditor staff using internal documents from CCCD and DOTD and LaPAS information from the Office of Planning and Budget.

Need more information?

Contact Dan Kyle, Louisiana Legislative Auditor, at (225) 339-3800.

A copy of this report is available at our web site (www.lla.state.la.us).

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